National Climatic Data Center

DATA DOCUMENTATION

FOR

DATA SET 9958 (DSI-9958)

Sea Ice Charts

January 6, 2003

National Climatic Data Center
151 Patton Ave.
Asheville, NC 28801-5001 USA

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1. **Abstract**: The files contained in this data set were produced at the National Ice Center and derived from remote sensed data, and observations. RADARSAT, DMSP/OLS, NOAA/TIROS, and DMSP/SSM/I sensors comprised the majority of the sensors used in the analysis. This data set is an extension to the existing set of ice charts in the EWG data set 1972-1994.

The charts contain information pertaining to the concentration of sea ice in the Arctic Ocean and it's marginal sea. The data also contains estimations on the thickness of the ice through the use of satellite data and theoretical thickness measurements. The third type of data included in the polygons is the forms of sea ice either belts and strips or if the ice is fasted (connected) to the coast.

The National Ice Center has worked towards collecting data from 1995-2000 converting them into a standard format and running the product through a quality control process since 2000. Raster and Shapefile charts can be obtained at the WMO World Data Center-A. For ice information, contact the National Snow and Ice Data center. Current charts and coverages can be found at the National Ice Center's web site http://www.natice.noaa.gov.

ESRI Arc Coverage is in export format .e00 compression. In order to use this data set you need to download freeware from the ESRI web site http://www.esri.com/software/index.html. You will need Import 7.1.exe to convert the .e00 back to a coverage and ArcExplorer any version to display the coverage. Other software that can be used to decompress and view .e00 is ArcView 3.2, which has Import 7.1 in the service pack, ArcInfo, and ArcGIS packages. All three are Commercial off the Shelf Software (COTS) can be purchased through ESRI.

In its native format, NIC Ice charts are ESRI arc coverages of the Northern Hemisphere. You can view the data by COT software Arcview, ArcInfo, and ArcGIS packages from ESRI. You can also download Freeware from the ESRI site http://www.esri.com/software/index.html called ArcExplorer to examine the data.

2. **Element Names and Definitions**: Please see http://www.esri.com

3. **Start Date**: 19950103

4. **Stop Date**: Ongoing.

5. **Coverage**:

   a. Southernmost Latitude: 40N
   b. Northernmost Latitude: 90N
   c. Westernmost Longitude: 180W
   d. Easternmost Longitude: 180E

6. **How to Order Data**:

   Ask NCDC's Climate Services about the cost of obtaining this data set.
   Phone: 828-271-4800
   FAX: 828-271-4876
   E-mail: **NCDC.Orders@noaa.gov**

7. **Archiving Data Center**:

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, NC 28801-5001
Phone: (828) 271-4800.

8. Technical Contact:

National Ice Center / Liaison Officer
FOB# 4 Room 2301
4401 Suitland Road
Suitland, MD 20746
Phone: (301) 457-5303
Fax: (301) 457-5300
E-mail: liaison@www.natice.noaa.gov

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9. Known Uncorrected Problems: ESRI software has a weakness in using Polar stereographic Projection when lines cross the 180 degree or 0 degree longitude. Errors were corrected in this data set, but re-projecting this data or changing the topology may cause data loss along those boundaries.

10. Quality Statement: Extensive Quality Control checks of special continuity, and attributes of polygons on each chart were made. The QC was done by an expert analyst at the National Ice Center.

11. Essential Companion Datasets: No other data sets are necessary to use this data.

12. References:

Flynn, T., M. Goddard, K. Partington, D. Lamb and C. Bertoia, 2002: Arctic ice climate signals revealed in US National Ice Center ice charts and comparison to the passive microwave sea ice record. *Workshop on Sea-ice Extent and the Global Climate System*. Toulouse, France, Arctic Climate System Study / Climate and Cryosphere Project of the World Climate Research Programme.